

separation of these tracts and blocks from the rural tracts in the county.²²³³ ORHP/HHS also suggests giving special consideration to "frontier" areas with extremely low density within rural areas.²²³⁴

691. Several commenters specifically approve of using the ORHP/HHS methodology for defining rural areas.²²³⁵ North Dakota Health suggests using a method that does not rely on county boundaries alone for large counties with large disparities of density.²²³⁶ Florida Cable states that the ORHP/HHS method "may be appropriate."²²³⁷ American Telemedicine endorses the OMB county classification system without reference to the "Goldsmith Modification" recommended by ORHP/HHS.²²³⁸

692. Other Methods. AHA²²³⁹ and High Plains Rural Health Network²²⁴⁰ assert that "frontier" areas with particularly low population density need special consideration. One commenter, Missouri PSC, expresses the fear that the ORHP/HHS and USDA methods might be too restrictive.²²⁴¹ Missouri PSC asserts that other factors such as the driving distance from a hospital or medical center or number of doctors in the community should be considered when establishing a definition of rural.²²⁴² Nebraska Hospitals suggests that all hospitals in densely-populated counties of Lancaster and Douglas should be considered urban, and the rest of the counties in Nebraska as rural.²²⁴³ USTA favors the Census Bureau's definition of

²²³³ ORHP/HHS comments at 5-6.

²²³⁴ ORHP/HHS comments at 5-6.

²²³⁵ MCI comments at 21; NCTA comments at 20; RUS comments at 13.

²²³⁶ North Dakota Health comments at 2 ("Caution against using county populations as a sole determinant as counties can vary significantly in size. . .").

²²³⁷ Florida Cable comments at 14; MCI comments at 21; RUS comments at 13.

²²³⁸ American Telemedicine comments at 9.

²²³⁹ AHA comments at 5.

²²⁴⁰ High Plains Rural Health Network comments at 2.

²²⁴¹ Missouri PSC comments at 18-19.

²²⁴² Missouri PSC comments at 18.

²²⁴³ Nebraska Hospitals comments at 2.

"urban" if it were modified to exclude less densely-populated areas.²²⁴⁴

c. Discussion

693. In order to implement section 254(h)(1)(A), we conclude that the Commission must define the boundary between urban and rural areas within each state. We find that it is necessary to designate rural areas in order to determine whether a health care provider is located in rural areas of a state. We also conclude that it is necessary to designate rural areas in order to determine "comparable rural areas" needed for calculating the credit or reimbursement to a carrier who provides services at reduced rates. For both of these purposes, we recommend the Commission use non-metro counties (or county equivalents), as identified by the OMB MSA list of metro and non-metro counties, together with non-metro counties identified in the most currently available "Goldsmith Modification" of the MSA list used by the ORHP/HHS.²²⁴⁵ To the extent that the Commission can improve upon these definitions prior to its statutory deadline, by identifying other rural areas in metro counties not identified in the current version of the Goldsmith Modification, we encourage the Commission to do so.

694. For the task of determining the size and boundaries of the rural areas in a state, we believe it is appropriate to use a method that seeks to include as many of the truly rural areas as possible. We agree with ORHP/HHS that no currently-used method of designating rural areas is perfect.²²⁴⁶ We conclude, however, that the OMB MSA method is, by itself, under-inclusive of many rural areas and therefore does not meet the standards set by the Commission in the NPRM.²²⁴⁷ The Goldsmith Modification, by identifying by census tract or block more densely-populated areas in large, otherwise rural counties somewhat ameliorates this problem.²²⁴⁸ This method meets the "ease of administration" criterion as well. Lists of MSA counties and Goldsmith-identified census blocks and tracts already exist, updated to 1995. Through the use of these lists, any health care provider can easily determine if it is located in a rural area and therefore whether it meets that test of eligibility for support.

695. The implementation of section 254(h)(1)(A) also requires a designation of

²²⁴⁴ USTA comments at 10-11. USTA is also concerned that expanding the definition beyond this would "increase the difficulties in sizing the fund." USTA reply comments at 7.

²²⁴⁵ For a discussion of OMB metro and non-metro areas, MSAs and the Goldsmith Modification, *see* ORHP/HHS comments at 5 and section XI.D.1.b., *supra*.

²²⁴⁶ ORHP/HHS comments at 5.

²²⁴⁷ NPRM at para. 95.

²²⁴⁸ ORHP/HHS comments at 5-6.

urban area boundaries in order to determine the exact area within which an "urban rate" for a telecommunications service is charged. For some purposes, defining the boundaries of the rural areas in a state, as we have recommended here, would also suffice for determining the corresponding urban areas. In this case, however, we believe that, to define the relevant urban area, it may be necessary to designate a different, somewhat more refined boundary than the county-based boundary described in the preceding paragraph. Because we are recommending that the highest tariffed or publicly available urban rate be used to set the urban rate charged to the health care provider,²²⁴⁹ we think it is important to use for this purpose an urban boundary smaller than a county boundary so as to minimize the possibility of inadvertently including distance-based or lower-density-based surcharges within the comparable urban rate. We also believe that using larger cities for this purpose will increase the likelihood that the rates in those cities will reflect to the greatest extent possible, reductions in rates based on large-volume, high-density factors that affect telecommunications rates. Because we see nothing in the 1996 Act or its legislative history that would prohibit using different definitions of urban for different purposes in section 254, we recommend using, for purposes of determining the "urban rate in the closest urban area," the jurisdictional boundaries of larger cities. We further recommend that the Commission designate by regulation the exact city population size to define the term "large city," that it finds will best balance the factors described in this paragraph.²²⁵⁰

696. We conclude that where all rural areas are entitled to a rate no higher than the highest rate in the closest city, there is no need to make additional provisions for frontier areas, or areas with extra-low population density, as some parties suggest.²²⁵¹ Likewise, employing the methods recommended here for determining rural areas, we see no need to consider other factors such as number of doctors in the community or driving distance from the hospital in formulating a definition of rural areas.²²⁵² We find that the Census Bureau's definition of "urban," which one commenting party suggests using,²²⁵³ would be less easily administered than the one suggested here because it is not based on political boundaries. Finally, we reject the suggestion that we use a definition consistent with the definition of "rural telephone company" in the Act because that definition does not provide a geographic boundary, it is meant to distinguish telecommunications companies from one another, not service and rate areas for rural health care providers and it is determined by the number of access lines and other factors that are not relevant to the issues of rural boundaries necessary

²²⁴⁹ See discussion of determining the urban rate at section XI.C.1.c., *supra*.

²²⁵⁰ See discussion of determining the urban rate at section XI.C.1.c., *supra*.

²²⁵¹ See AHA comments at 5; High Plains Rural Health Network comments at 2.

²²⁵² Missouri PSC comments at 18-19.

²²⁵³ USTA comments at 10-11.

for implementing support mechanisms for health care providers.

2. Defining eligibility for health care providers

a. Background

697. Section 254(h)(1)(A) grants the right to receive federal universal service support to "any public or non-profit health care provider that serves persons who reside in rural areas of that state. . . ." ²²⁵⁴ No provision in the section expressly limits or defines where a health care provider must be physically located in order to be eligible for universal service support under this section. The section further provides that the calculation of the amount of credit due to the carrier for providing services to the health care provider is to be based on rates in "comparable rural areas." ²²⁵⁵

698. In the Joint Explanatory Statement, Congress referred to "health care providers for rural areas" in explaining that institutional users were intended to "have affordable access to modern telecommunications services that will enable them to provide medical and educational services to all parts of the nation." ²²⁵⁶ In another paragraph, the Joint Explanatory Statement referred to "the rural health care provider" in the course of explaining its intent that the rural health care provider receive an affordable rate for the services necessary for the purposes of telemedicine and instruction relating to such services. ²²⁵⁷

699. In the NPRM, the Commission noted that the statute gives eligibility to receive support under the universal service support mechanism to health care providers who serve persons who reside in rural areas. ²²⁵⁸

b. Comments

700. Ameritech and MCI assert that only health care providers located in rural areas should be eligible to receive the reasonably comparable urban rates provided in section 254(h)(1)(A). ²²⁵⁹ Ameritech's position seems to be based on ease of administration. ²²⁶⁰ The

²²⁵⁴ 47 U.S.C. § 254(h)(1)(A).

²²⁵⁵ 47 U.S.C. § 254(h)(1)(A).

²²⁵⁶ Jt. Statement of Managers, S. Conf. Rep. No. 104-230, 104th Cong., 2nd Sess. 132 (1996).

²²⁵⁷ Jt. Statement of Managers, S. Conf. Rep. No. 104-230, 104th Cong., 2nd Sess. 133 (1996).

²²⁵⁸ NPRM at para. 104.

²²⁵⁹ Ameritech comments at 19 n.30; MCI comments at 21.

reasoning behind MCI's position is not stated in MCI's comments.²²⁶¹ On the other hand, AHA suggests that health care providers located in urban areas should also be eligible for support.²²⁶²

701. American Telemedicine, concerned about allocating limited resources, proposes that discounted telecommunications services be made available to both primary health care providers located in rural areas as defined in the OMB classification and secondary and tertiary care facilities located in other parts of the state that have telecommunications links for the provision of health care with rural health care institutions.²²⁶³

c. Discussion

702. Section 254(h)(1)(A) defines eligibility for support to include any health care provider that "serves persons who reside in rural areas in that state."²²⁶⁴ Because virtually all health care providers serve some rural residents, this definition could be read so expansively that it would theoretically offer support to nearly every health care provider in the country. An eligibility definition that includes providers located in urban areas, however, appears unworkable because implementation of the support mechanism is designed to reduce rural rates to a comparable level with urban rates.

703. We recommend creating a mechanism that includes the largest reasonably practicable number of health care providers that primarily serve rural residents and that, due to their location, are prevented from obtaining telecommunications services at rates available to urban customers. We agree, therefore, with the commenters that urge that eligibility to obtain telecommunications services at rates reasonably comparable to rates in the state's urban areas be limited to providers located in rural areas.²²⁶⁵ For purposes of defining a health care provider's eligibility for support under section 254(h)(1)(A), we define the term "rural counties" to mean any "non-metro" county as defined by the OMB MSA list, along with the

²²⁶⁰ Ameritech comments at 19 n.30.

²²⁶¹ MCI comments at 21 n.16.

²²⁶² AHA comments at 5 ("Beyond the definition of rural, the FCC should also consider that an advantage afforded by health care telecommunications networks is the dynamic and open collegial exchange of information between practitioners in and among rural settings, and between rural areas and their urban counterparts . . . The FCC should study and consider rates in non-rural areas as well.").

²²⁶³ American Telemedicine comments at 10.

²²⁶⁴ 47 U.S.C. § 254(h)(1)(A).

²²⁶⁵ See Ameritech comments at 19 n.30; MCI comments at 21 n.16. American Telemedicine would limit support for primary care providers to those located in rural areas. American Telemedicine comments at 10.

non-urban areas of those metro counties identified in the Goldsmith Modification used by the ORHP/HHS.²²⁶⁶

704. We have recommended a definition of "rural areas" that is as expansive as reasonably possible in order to include the maximum number of separately identifiable rural areas in which rates may be higher than for customers in nearby cities.²²⁶⁷ We also find that to the extent that this recommended mechanism excludes health care providers that are located in urban areas and otherwise technically eligible, those providers already have access to telecommunications services at urban rates and the statute contemplates no additional universal service support.

3. Definition of health care provider.

a. Background

705. Section 254(h)(1)(A) states, in relevant part, that "[a] telecommunications carrier shall, upon receiving a bona fide request, provide telecommunications services which are necessary for the provision of health care services in a State . . . , to *any public or nonprofit health care provider* that serves persons who reside in rural areas in that State. . .".²²⁶⁸

706. Section 254(h)(4), entitled "Eligibility of Users," provides that "[n]o entity listed in this subsection shall be entitled to preferential rates or treatment as required by this subsection, if such entity operates as a for-profit business. . .".²²⁶⁹

707. Section 254(h)(5), entitled "Definitions," states:

For purposes of this subsection: . . . [t]he term 'health care provider' means-

- (i) post-secondary educational institutions offering health care instruction, teaching hospitals, and medical schools;
- (ii) community health centers or health centers providing health care to migrants;
- (iii) local health departments or agencies;

²²⁶⁶ For a discussion of OMB metro and non-metro areas, MSAs and the Goldsmith Modification, see ORHP/HHS comments at 5 and section XI.D.1.c., *supra*.

²²⁶⁷ See section XI.C.1., *supra*.

²²⁶⁸ 47 U.S.C. § 254(h)(1)(A) (emphasis added).

²²⁶⁹ 47 U.S.C. § 254(h)(4).

- (iv) community mental health centers;
- (v) not-for-profit hospitals;
- (vi) rural health clinics; and
- (vii) consortia of health care providers consisting of one or more entities described in clause (i) through (vi).²²⁷⁰

b. Comments

708. General Comments. Although the NPRM did not specifically seek comment on the definition of the term "health care provider," some commenters claim that further clarification of the definition in section 254(h)(5)(B) is needed. For example, ORHP/HHS asks whether Congress intended these terms to have specific meanings under other federal laws such as the Public Health Service Act or whether Congress intended the Commission to give the term broader definition. ORHP/HHS also urges the Commission to seek further clarification from Congress on what its intentions were concerning the seven categories of public or non-profit health care providers to which the 1996 Act refers. ORHP/HHS asserts that if the categories had been capitalized in the legislation or were to be in the regulations, they would refer to a specific set of providers that are designed to receive special consideration or funding under federal programs. ORHP/HHS argues that since these terms were not capitalized, the 1996 Act appears to imply a more generic, broader definition of these providers.²²⁷¹

709. Additions to Statutory Definition. Some commenters suggest additions to the definition of health care providers in the 1996 Act. American Telemedicine argues that the final FCC order implementing section 254 should allow individual health care practitioners serving rural residents through private practice to participate in the benefits offered under this program.²²⁷² Community Colleges argues that the Commission should confirm that community colleges are eligible for universal service support as post-secondary educational institutions offering health care instruction, including emergency medical technician training.²²⁷³ Arizona Health recommends that state offices of rural health be added to the list of rural health providers.²²⁷⁴ Mountaineer Doctor TV asserts that the following organizations should be included in the not-for-profit category: universities, not-for-profit hospitals, state

²²⁷⁰ 47 U.S.C. § 254(h)(5)(B).

²²⁷¹ ORHP/HHS comments at 6-7.

²²⁷² American Telemedicine comments at 10.

²²⁷³ Community Colleges comments at 10.

²²⁷⁴ Arizona Health comments at 2.

not-for-profit prisons, and county not-for-profit prison systems.²²⁷⁵ The Advisory Committee suggests amending section 254(h)(5)(B) to include non-profit nursing homes and other long-term care facilities.²²⁷⁶ It urges the inclusion of non-profit home health care providers in rural areas, which it maintains is a rapidly growing segment of the health care industry, on the list of eligible health care providers. The Advisory Committee maintains that this group of health care providers can use telecommunications services for making electronic housecalls to the elderly, chronically ill, and homebound mentally ill.²²⁷⁷

710. Eligibility Requirements. Other commenters emphasize eligibility requirements. Telec Consulting suggests that no universal service support should be given to health care providers that operate on a for-profit basis.²²⁷⁸ The Advisory Committee argues that the distinction between non-profit and for-profit should not determine who should be eligible for services at reduced rates in rural areas because of the advent of increasingly complex relationships between profit and non-profit health care providers.²²⁷⁹ For example, many non-profit hospitals are acquiring for-profit health care ventures and institutions to remain competitive.²²⁸⁰ The Advisory Committee argues that the focus should be on the improved delivery of health care to rural residents. It maintains that reduced-rate telemedicine services that allow a for-profit health care professional to consult with a specialist at an academic health center should be viewed as a health care benefit to the patient, not an unfair subsidy to the for-profit health care professional.²²⁸¹ Therefore, the Advisory Committee argues, the Commission and Congress should consider the complex and competitive arrangements in the current health care delivery system when determining who is eligible to receive reduced-rate services.²²⁸² Furthermore, the Advisory Committee argues that since most health care in rural areas is provided by for-profit professionals operating in a single office in remote areas with small profit margins, the Commission or Congress should consider extending the eligibility criteria to cover such individuals who can show that they cannot afford any but reduced-rate

²²⁷⁵ Mountaineer Doctor TV comments at 2.

²²⁷⁶ Advisory Committee Report at 15.

²²⁷⁷ Advisory Committee Report at 15.

²²⁷⁸ Telec Consulting comments at 16.

²²⁷⁹ Advisory Committee Report at 14.

²²⁸⁰ Advisory Committee Report at 14.

²²⁸¹ Advisory Committee Report at 14.

²²⁸² Advisory Committee Report at 14.

services.²²⁸³ The Advisory Committee recognizes, however, that extending the eligibility criteria may require an increase in the amount of universal service support.²²⁸⁴

c. Discussion

711. We recommend that the Commission attempt no further clarification of the definition of the term "health care provider." We find that section 254(h)(5)(B) adequately describes those entities intended by Congress to be eligible for universal service support. Therefore, we decline to recommend expanding or broadening those categories.

712. We do not agree with ORHP/HHS's argument that since the categories listed were not capitalized, the scope of the definitional categories in section 254(h)(5)(B) cannot reasonably be defined for purposes of efficiently administering this program of universal service support.²²⁸⁵ We acknowledge Community Colleges' concern that community colleges be considered eligible for universal service support and we conclude that many such institutions may well fit in the definition of "post-secondary educational institutions offering health care instruction."²²⁸⁶ It would thus appear that an otherwise eligible subdivision of such an institution would be able to obtain supported services where 1) the entity offers health care instruction, 2) its officers can certify that the telecommunications services would be used exclusively for purposes reasonably related to the provision of such instruction, and 3) the health care provider is legally authorized to provide such instruction in that state.²²⁸⁷ We also note Arizona Health's request to add state offices of rural health²²⁸⁸ and Mountaineer Doctor TV's request to add state and county not-for-profit prisons to the list.²²⁸⁹ We conclude, however, that such additions cannot be included within the plain meaning of the language of the 1996 Act. Although we are bound by the language of the statute, we note that the commenters and the Advisory Committee have argued that the line drawn in the statute between eligible and non-eligible providers may not reflect either changing economic relationships in rural areas or changing patterns of health care provision.²²⁹⁰

²²⁸³ Advisory Committee Report at 14.

²²⁸⁴ Advisory Committee Report at 14.

²²⁸⁵ ORHP/HHS comments at 6, 7.

²²⁸⁶ See 47 U.S.C. § 254(h)(5)(B)(i).

²²⁸⁷ See the certification required in a bona fide request as set forth in section XI.E.1.c., *infra*.

²²⁸⁸ Arizona Health comments at 2.

²²⁸⁹ Mountaineer Doctor TV comments at 2.

²²⁹⁰ See Advisory Committee Report at 13-15.

4. Selecting between offset or reimbursement for telecommunications carriers.

a. Background

713. Section 254(h)(1)(A) states that a telecommunications carrier that provides designated services to rural health care providers shall be entitled to have an amount equal to the difference, if any, between the rates for services provided to health care providers for rural areas in a state and the rates for similar services provided to other customers in comparable rural areas in that state treated as a service obligation as a part of its obligation to participate in the mechanisms to preserve and advance universal service.²²⁹¹ This language differs from that of section 254(h)(1)(B), pertaining to schools and libraries, which explicitly permits telecommunications carriers providing designated services to schools and libraries to be reimbursed for services, either through an offset to their obligation to contribute to universal service support, or through reimbursement drawn from support funds.²²⁹²

714. In the NPRM, the Commission noted the different mechanisms of carrier support and sought comment on whether any statutory or policy rationale requires reimbursing carriers differently under subsection (h)(1)(A) than under subsection (h)(1)(B). The Commission asked whether subsection (h)(1)(A) permits reimbursement only through an offset to contributions, prohibiting direct compensation payments. The Commission also sought comment on the advantages of using the offset or reimbursement alternatives set forth in subsection (h)(1)(B) for compensating carriers serving health care providers as well as for carriers serving schools and libraries.²²⁹³

b. Comments

715. Several commenters find no reason to treat telecommunications carriers serving health care providers any differently from those serving schools and libraries for reimbursement purposes.²²⁹⁴ NCTA asserts that direct reimbursement is prohibited under section 254(h)(1)(A).²²⁹⁵ While NECA and American Telemedicine maintain that direct

²²⁹¹ 47 U.S.C. § 254(h)(1)(A).

²²⁹² 47 U.S.C. § 254(h)(1)(B).

²²⁹³ NPRM at para. 106.

²²⁹⁴ American Telemedicine comments at 11; NCTA comments at 22; NECA comments at 16 n.34.

²²⁹⁵ NCTA comments at 22.

reimbursement is allowed under section 254(h)(1)(A),²²⁹⁶ Idaho PUC argues that direct reimbursement should not be allowed so as to reduce the incentive for fraud or "gaming the system."²²⁹⁷ Citizens Utilities asserts that if the carrier that provides the telecommunications service to a rural health care provider under section 254(h)(1)(A) is eligible pursuant to section 214(e), that carrier is entitled to claim reimbursement from the support fund, but if the carrier is not qualified under section 214(e), it is entitled only to take an offset against its universal service contribution.²²⁹⁸ Metricom argues a position similar to Citizens Utilities' position and asserts that, although the provisions regarding health care providers in section 254(h)(1)(A) do not explicitly override section 214(e), it believes such an override is implied because public institutional users are treated equally everywhere else in the 1996 Act.²²⁹⁹ Nebraska Hospitals argues that compliance with rate guidelines should be a condition of eligibility for interstate support pursuant to section 254(h).²³⁰⁰

c. Discussion

716. We recommend that the Commission allow telecommunications carriers providing services to health care providers at reasonably comparable rates under the provisions of section 254(h)(1)(A), to treat the amount eligible for support, calculated as recommended herein, as an offset toward the carrier's universal service support obligation. We recommend that the Commission disallow the option of direct reimbursement although we recognize that this alternative is within the Commission's authority. Because we agree with the commenters that assert that an offset mechanism is both less vulnerable to manipulation and more easily administered and monitored,²³⁰¹ we recommend using an offset rather than a reimbursement mechanism. Consequently, we do not comment on Citizens Utilities' argument that carriers deemed eligible under section 214(e) should receive reimbursement but carriers not eligible under section 214(e) should be entitled to an offset.²³⁰² We recognize a potential problem in the case where the total of a carrier's rate reductions exceed its universal service obligation in any one year. Accordingly, we recommend that carriers be allowed to carry offset balances forward to future years so that the full amounts eligible to be treated as a

²²⁹⁶ American Telemedicine comments at 11; NECA comments at 16.

²²⁹⁷ Idaho PUC comments at 15.

²²⁹⁸ Citizens Utilities comments at 19.

²²⁹⁹ Metricom comments at 6 n.14.

²³⁰⁰ Nebraska Hospitals comments at 2.

²³⁰¹ See Idaho PUC comments at 15.

²³⁰² Citizens Utilities comments at 19.

credit may be applied to reduce their universal service obligation.

**E. Restrictions on Telecommunications Services
Provided to Rural Health Care Providers**

1. Bona Fide Requests

a. Background

717. Section 254(h)(1)(A) states, in relevant part, that "[a] telecommunications carrier shall, upon receiving a *bona fide request*, provide telecommunications services which are necessary for the provision of health care services in a State. . ." (emphasis added).²³⁰³

718. The NPRM asked that interested parties identify and discuss the safeguards needed to ensure that telecommunications carriers providing service pursuant to section 254(h)(1)(A) are, in fact, responding to the receipt of a "bona fide request" for "telecommunications services which are necessary for the provision of [rural] health care services in a State."²³⁰⁴ The Commission also sought comment on whether it might require certification from rural health care providers requesting telecommunications services under section 254(h)(1)(A). Furthermore, in its Public Notice, the Common Carrier Bureau asked commenters to identify the least administratively burdensome requirement that could be used to ensure that requests for supported telecommunications services are bona fide requests within the intent of section 254(h).²³⁰⁵

719. The Commission suggested that one possible approach would be to require each telecommunications carrier providing telecommunications services to rural health care providers under this provision to obtain written certification from the health care provider that these services are necessary for the provision of health care services.²³⁰⁶ The Commission also sought comment on alternative or additional measures to ensure that universal service support provided to telecommunications carriers under section 254(h)(1)(A) is used for its intended purpose.²³⁰⁷

b. Comments

²³⁰³ 47 U.S.C. § 254(h)(1)(A).

²³⁰⁴ NPRM at para. 103 (citing 47 U.S.C. § 254(h)(1)(A)).

²³⁰⁵ Public Notice, question No. 15.

²³⁰⁶ NPRM at para. 103.

²³⁰⁷ NPRM at para. 103.

720. No Safeguards Necessary. Idaho PUC argues that the bona fide request requirement seems unnecessary because providers are unlikely to provide unnecessary services to rural areas without large subsidies. Idaho PUC argues that competitive markets will force the carrier to sell its services, because the carrier will be unable to subsidize these services with revenues from other sources. For that reason, Idaho PUC concludes that ensuring bona fide requests is not likely to be a major problem.²³⁰⁸ Apple argues that, since some of the public institutional users receiving telecommunications services pursuant to section 254(h) do not have the resources to analyze a complex set of rules governing their rights to obtain telecommunication services on a discounted basis, there should be a strong presumption that schools, libraries and health care providers will act responsibly. Apple contends that any request made by an authorized official of the entity seeking service should be deemed bona fide.²³⁰⁹ The Advisory Committee argues that prices of services, even at reduced rates, will serve to self-monitor use of reduced-rate services. For example, a two doctor rural clinic will likely not be able to afford excess telecommunications capacity even at reduced rates.²³¹⁰

721. Certification Requirements. Many commenters assert that there should be some type of certification from the health care provider or the carrier that reduced-rate telecommunications services are necessary for the provision of health care services.²³¹¹ Some commenters suggest specific methods of self-certification. Alliance for Distance Education asserts, for example, that a health care provider should be able to self-certify that it is providing rural health care and instruction by listing the rural areas it serves in its application to a telecommunications service provider for health care rates.²³¹² PacTel contends that entities redeeming credits should submit a sworn statement attesting that they are making a bona fide request.²³¹³ Florida Cable comments that the goal of ensuring that carriers are responding to bona fide requests for services can be achieved through a plan containing the following components: 1) a determination of eligible facilities; 2) a needs assessment for the eligible facilities; 3) a technology-neutral applications plan; 4) a competitive bid process for needed services and applications; and 5) a safety net provision if no competitive bids are

²³⁰⁸ Idaho PUC comments at 14.

²³⁰⁹ Apple further comments at 4.

²³¹⁰ Advisory Committee Report at 7.

²³¹¹ See, e.g., North Dakota Health comments at 2-3; North Dakota PSC comments at 4; AT&T further comments at 15; GCI further comments at 6; NCTA further comments at 5.

²³¹² Alliance for Distance Education comments at 1.

²³¹³ PacTel further comments at 21.

received for an eligible facility.²³¹⁴ NCTA comments that self-certification by rural health care providers would be the least burdensome approach and is unlikely to generate abuse of the system. NCTA states that the Commission should make some allowance for different needs across states and initially rely on a complaint system rather than impose burdensome certification requirements before it is clear they are needed.²³¹⁵ Some commenters argue that certification requirements should be imposed to ensure the intended use of rate reductions disbursed as block grants or direct billing credits. Ameritech asserts that it would not be unreasonable to require the health care provider's financial officer to sign a personal, sworn attestation that the funds have been used as intended by the 1996 Act.²³¹⁶ AT&T suggests that the health care provider certify that the applicant is eligible for reduced-rate service; that the service is necessary to support the application planned; and the associated hardware, wiring, on-site networking and training are to be deployed simultaneously with the discounted service.²³¹⁷ ITC suggests a certification statement from the institution, and random tests or audits by the universal service administrator.²³¹⁸ NYNEX suggests annual certification consisting of verification of the existence of a technology plan and a checklist of "other information helpful in tracking universal service progress."²³¹⁹

722. Federally Imposed Safeguards. Several commenters assert that the Commission should impose mechanisms to ensure that telecommunications users are making bona fide requests. Century asserts that the Commission should define "bona fide requests" for section 254(h) purposes and should investigate specific complaint filings.²³²⁰ CFA maintains that requiring public institutional users receiving telecommunications services under section 254(h) to comply with standard procurement procedures combined with random audits by the universal service administrator would strike a reasonable balance.²³²¹ North Dakota Health maintains that an ongoing log of the uses of the services should be maintained, and should be open to a reviewing agency on a periodic basis so that appropriate use of the services can be

²³¹⁴ Florida Cable comments at 14.

²³¹⁵ NCTA comments at 22.

²³¹⁶ Ameritech further comments at 18.

²³¹⁷ AT&T further comments at 15. *See also* GTE further comments at 21; NCTA further comments at 5; Netscape further comments at 14; U.S. Distance Learning Ass'n further comments at 7.

²³¹⁸ ITC further comments at 7.

²³¹⁹ NYNEX further comments at 11-12.

²³²⁰ Century further comments at 13.

²³²¹ CFA further comments at 8.

ensured.²³²² On the other hand, BellSouth states that any requirements used to ensure bona fide requests for supported telecommunications services should be imposed at the district or state level.²³²³

723. Audit Program. Some commenters suggest that the mechanism of universal service support for health care providers include a suitable program of random tests and site audits as an enforcement scheme.²³²⁴ Some commenters assert that the need for an audit program could be avoided if block grants are not used. ALA states that the apparent need for an audit program is the reason why it opposes block grants or any such top-down distribution. ALA maintains that suitable accountability would exist in a reduced-rate program without the need for centralized oversight.²³²⁵ Similarly, New York DOE states that an audit program would not be necessary if discounts are returned directly to the institution. New York DOE further claims that eligible institutions should be able to use savings from discounts at their discretion.²³²⁶ Bell Atlantic asserts that billing credit vouchers, which would ultimately be submitted by carriers for reimbursement, would ensure proper usage of funds and thus presumably reduce or eliminate the need for an audit program.²³²⁷ NCTA also encourages the use of billing credits to ensure the proper use of funds.²³²⁸

724. Other Suggestions. Ameritech asserts that the best way to ensure that a request for supported service is bona fide is to have the requester put some of its own money at risk. USTA emphasizes that the chosen method of ensuring proper usage of funds should not be burdensome. For example, an electronic account system that restricted fund reimbursement to the offering of telecommunications services could alleviate many of the accountability concerns.²³²⁹

c. Discussion

725. We recommend that every health care provider that makes a request for

²³²² North Dakota Health comments at 2-3.

²³²³ BellSouth further comments at 25.

²³²⁴ ITC further comments at 7.

²³²⁵ ALA further comments at 12-13. *See also* Union City Board of Education further comments at 3, 12.

²³²⁶ New York DOE further comments at 8.

²³²⁷ Bell Atlantic further comments at 5.

²³²⁸ NCTA at 5.

²³²⁹ USTA further comments at 12.

universal service support for telecommunications services be required to submit to the carrier a written request, signed by an authorized officer of the health care provider, certifying under oath the following information:

- 1) which definition of health care provider in section 254(h)(5)(B) under which the requester falls;
- 2) that the requester is physically located in a rural area (OMB defined non-metro county or Goldsmith-defined rural section of an OMB metro county);²³³⁰
- 3) that the services requested will be used solely for purposes reasonably related to the provision of health care services or instruction that the health care provider is legally authorized to provide under the law of the state in which they are provided;
- 4) that the services will not be sold, resold or transferred in consideration of money or any other thing of value;²³³¹
- 5) if the services are being purchased as part of an aggregated purchase with other entities or individuals, the full details of any such arrangement, including the identities of all co-purchasers and the portion of the services being purchased by the health care provider.

726. We conclude that the above certification covers the key portions of section 254(h) governing eligibility for and limitation of use of supported services for health care providers and is the minimum certification necessary for adequate monitoring of compliance with section 254(h)(1)(A). We agree with NYNEX's suggestion that the certification should be renewed annually.²³³²

727. In addition, we recommend that the Commission require the universal service fund administrator to establish and administer a monitoring and evaluation program to oversee the use of universal service supported services by health care providers, and the pricing of those services by carriers.²³³³ We conclude that a compliance program is necessary to ensure that services are being used for the provision of lawful health care, that requesters are complying with certification requirements, that requesters are otherwise eligible to receive

²³³⁰ For a discussion of OMB metro and non-metro areas, Metropolitan Statistical Areas and the Goldsmith Modification, see ORHP/HHS comments at 5 and section XI.C.1.b., *supra*.

²³³¹ 47 U.S.C. § 254(h)(3).

²³³² NYNEX further comments at 11-12.

²³³³ Complaints against any common carrier subject to the 1996 Act may be filed with the Commission. See 47 U.S.C. § 208.

universal service support, that rates charged comply with the statute and regulations and that the prohibitions against resale or transfer for profit are strictly enforced. We disagree with ALA and New York DOE that suitable accountability would automatically exist in a reduced-rate program, where customers are investing a substantial amount of their own resources, without the need for any oversight.²³³⁴

728. We agree, however, with Apple's argument that, considering the limited resources many public and non-profit health care providers have to comply with complex regulations, there should be a strong presumption that health care providers will act responsibly.²³³⁵ Also, in formulating our recommendation as to the method of ensuring that requests are bona fide, we are mindful of the importance of choosing a method that minimizes, to the extent consistent with section 254, the administrative burden on regulators and carriers.²³³⁶ For these reasons, we have sought to recommend the least burdensome certification plan that will provide safeguards that are adequate to ensure that the supported services will be used lawfully and for their intended purposes.²³³⁷

729. For example, we do not recommend Florida Cable's five-component certification plan because we find it too expansive, expensive, and burdensome.²³³⁸ We also reject NYNEX's suggestion that certification should include verification of the existence of a technology plan and a checklist of other information helpful in tracking universal service.²³³⁹ Although such a plan might be useful in a discount plan where disincentives to over-purchasing are needed, we find such a requirement unnecessarily burdensome where health care providers will be required to invest substantial resources in order to pay urban rates for these services. Likewise, we do not see the need to require health care providers to certify that hardware, wiring, on-site networking and training are to be deployed simultaneously with the service, as suggested by AT&T.²³⁴⁰ Finally, we do not accept Ameritech's suggestion that the financial officers of health care provider organizations be required to attest under oath that

²³³⁴ See ALA further comments at 12-13; New York DOE further comments at 8.

²³³⁵ See Apple further comments at 4.

²³³⁶ Cf., NPRM at para 100.

²³³⁷ See NPRM at para. 103.

²³³⁸ See Florida Cable comments at 14.

²³³⁹ NYNEX further comments at 11-12.

²³⁴⁰ AT&T further comments at 15.

funds have been used as intended by the 1996 Act,²³⁴¹ because we believe that the pre-expenditure affidavit described above, which is to be submitted to the carrier along with the request for services, is sufficient under these circumstances.

730. We also recommend that the Commission encourage carriers across the country to notify eligible health care providers in their service areas of the availability of lower rates resulting from universal service support so that the goals of universal service to rural health care providers will be more rapidly fulfilled.

2. Restrictions on resale and aggregated purchases

a. Background

731. Section 254(h)(3) provides that "[t]elecommunications services and network capacity provided to a public institutional telecommunications user under this subsection may not be sold, resold, or otherwise transferred by such user in consideration for money or any other thing of value."²³⁴² The Joint Explanatory Statement explained that this section "clarifies that telecommunications services and network capacity provided to health care providers . . . may not be resold or transferred for monetary gain."²³⁴³

732. In the NPRM, the Commission asked commenters to suggest additional measures, other than discounts and financial support that would promote deployment of advanced services to health care providers.²³⁴⁴ The NPRM further asked commenters to address whether measures proposed would comply with the requirements of section 254(h)(3).²³⁴⁵

b. Comments

733. North Dakota Health argues that section 254(h)(3) threatens the ability of rural health care providers to make efficient use of their networks. It asserts that if private sector use of these facilities can improve efficiency and make them more cost-effective, this should

²³⁴¹ Ameritech further comments at 18.

²³⁴² 47 U.S.C. § 254(h)(3). *See also* the definition of health care provider including "consortia of health care providers" discussed in section XI.D.3., *supra*.

²³⁴³ Jt. Statement of Managers, S. Conf. Rep. No. 104-230, 104th Cong., 2nd Sess. 133 (1996).

²³⁴⁴ NPRM at para. 109.

²³⁴⁵ NPRM at para. 110.

be allowed.²³⁴⁶ USTA on the other hand, favoring strict enforcement of section 254(h)(3) argues that if restrictions are not enforced, telecommunications providers offering supported services will be, in effect, subsidizing non-eligible users.²³⁴⁷ A similar position is advanced by the Rural Iowa Indep. Tel. Ass'n although it maintains that the restriction on resale will not discourage the development of "networking partnerships" between health care providers, schools, libraries and other entities.²³⁴⁸

734. The Advisory Committee argues that an eligible health care provider may charge the patient or insurance company for the cost of the telecommunications service, but that charge should not be considered a resale under section 254(h)(3).²³⁴⁹ The Report also encourages the use of non-profit consortia to provide telemedicine services to eligible providers, through cooperative or other joint venture businesses. The Advisory Committee argues that users could purchase high capacity telecommunications services, which are often less expensive than multiple lower capacity services, by combining demand. Furthermore, the Report argues that advantage to rural areas would be even greater if consortia could include schools and libraries receiving benefits under the 1996 Act.²³⁵⁰ The Advisory Committee recommends that the Commission establish competitively neutral rules which ensure that federal, state, or local government-owned or subsidized communications networks do not unfairly compete by selling network services or excess capacity as commercial services in unfair competition with the private sector.²³⁵¹ The Report also suggests that the infrastructure required for rural telemedicine be shared among schools, libraries and health care providers.²³⁵²

c. Discussion

735. We advocate the strict enforcement of the prohibition in section 254(h)(3) against the resale of supported services, and we have urged that a sufficient audit program be established to monitor and evaluate the use of supported services in aggregated purchase

²³⁴⁶ North Dakota Health comments at 3.

²³⁴⁷ USTA comments at 12; Advisory Committee Report at 12.

²³⁴⁸ Rural Iowa Indep. Tel. Ass'n comments at 6.

²³⁴⁹ Advisory Committee Report at 13.

²³⁵⁰ Advisory Committee Report at 12-13.

²³⁵¹ Advisory Committee Report at 9.

²³⁵² Advisory Committee Report at 8.

arrangements.²³⁵³ We agree, however, with those commenters that maintain that this prohibition should not restrict or inhibit joint purchasing and network-sharing arrangements with both public and private entities and individuals.²³⁵⁴ Several commenters observe that these arrangements can be used to substantially reduce costs and in some cases, their availability might make the difference between success and failure of a rural telecommunications network.²³⁵⁵

736. Accordingly, we recommend that health care providers be encouraged to enter into aggregate purchasing and maintenance agreements for telecommunications services with other public and private entities and individuals, provided however, that the entities and individuals not eligible for universal service support pay full rates for their portion of the services. In addition, in these arrangements, we recommend that the Commission's order make clear that the qualified health care provider can be eligible for reduced rates, and the telecommunications carrier can be eligible for support, only on that portion of the services purchased and used by the health care provider.²³⁵⁶ We believe that these arrangements should be subject to full disclosure and close scrutiny under the audit program we recommend in section XI.E.1.c. above.

F. Advanced Telecommunications and Information Services

1. Background

737. Section 254(h)(2) directs the Commission to establish "competitively neutral rules. . . to enhance, to the extent technically feasible and economically reasonable, access to advanced telecommunications and information services for all public and nonprofit elementary and secondary school classrooms, health care providers, and libraries."²³⁵⁷ Section 254(h)(2) also directs the Commission to "define the circumstances under which a telecommunications carrier may be required to connect its network to such public institutional telecommunications users."²³⁵⁸ The statute does not define "advanced telecommunications services." "Information services" is defined, however, as "the offering of a capability for generating, acquiring,

²³⁵³ See section XI.E.1.c., *supra*.

²³⁵⁴ Rural Iowa Indep. Tel. Ass'n comments at 6.

²³⁵⁵ See, ORHP/HHS comments at 10-11. See also American Telemedicine comments at 3; Nebraska Hospitals comments at 2; Taconic Tel. Corp. reply comments at 5.

²³⁵⁶ See Merit comments at 4-5.

²³⁵⁷ 47 U.S.C. § 254(h)(2)(A).

²³⁵⁸ 47 U.S.C. § 254(h)(2)(B).

storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications."²³⁵⁹

738. The Joint Explanatory Statement provides the following explanation with respect to advanced telecommunications services:

New subsection (h)(2) requires the Commission to establish rules to enhance the availability of advanced telecommunications and information services to public institutional telecommunications users. For example, the Commission could determine that telecommunications and information services that constitute universal service for classrooms and libraries shall include dedicated data links and the ability to obtain access to educational materials, research information, statistics, information on Government services, reports developed by Federal, State, and local governments, and information services which can be carried over the Internet.²³⁶⁰

739. In the NPRM, the Commission acknowledged that section 254(h)(2), in contrast to section 254(h)(1)(A), requires identification of those advanced telecommunications services that carriers should make available to all health care providers to the extent technically feasible and economically reasonable.²³⁶¹ The Commission asked commenters to identify advanced telecommunications and information services and further identify the features and functionalities required to give health care providers access to those services. The Commission also asked commenters to suggest competitively neutral rules that would enhance that access.²³⁶² The Commission specifically asked whether advanced telecommunications and information services should be broader, narrower or identical to the services supported in section 254(h)(1)(A). In addition, the Commission requested suggestions as to additional measures, other than discounts and financial support, that would promote the deployment of advanced services to health care providers.²³⁶³

740. The Commission further asked commenters to address, for each measure proposed, whether it would be competitively neutral for carriers, telecommunications

²³⁵⁹ 47 U.S.C. § 153(20).

²³⁶⁰ Joint Statement of Managers, S. Conf. Rep. No. 104-230, 104th Cong., 2nd Sess. 133 (1996).

²³⁶¹ NPRM at para. 109 (*citing* 47 U.S.C. § 254(h)(2)(A)).

²³⁶² NPRM at para. 109.

²³⁶³ NPRM at para. 109.

providers, and any other affected entities. The Commission sought comment on whether the proposed measure would comply with the 1996 Act's requirements that telecommunications services and network capacity not be re-sold for value.²³⁶⁴ The Commission also asked how it should assess whether services proposed are technically feasible and economically reasonable.²³⁶⁵ In addition, the Commission asked for estimates of potential costs for each measure pursuant to the principle that support mechanisms be specific, predictable and sufficient.²³⁶⁶ Finally, the Commission requested proposals to define the circumstances under which a telecommunications carrier may be required to connect its network to such public institutional telecommunications users.²³⁶⁷

741. In connection with the question of what entity is eligible for support, the Commission noted that Congress intended to benefit "all. . . health care providers," as defined in section 254(h)(5)(B), not just health care providers serving persons who live in rural areas.²³⁶⁸ The Commission invited interested parties to comment and asked for the Joint Board's recommendation regarding this interpretation.²³⁶⁹

2. Comments

742. General Comments. Rural Iowa Indep. Tel. Ass'n is optimistic that the application of the mechanisms of support and encouragement of competition through the implementation of the 1996 Act will in itself help in enhancing access to advanced services.²³⁷⁰ Taconic Tel. Corp. argues that the goal of advanced services to schools, libraries and health care providers can only be achieved through collaborative partnerships with schools, the local community, coordinators, and state and federal legislators.²³⁷¹ Other commenters also propose allowing health care providers to join with government, school, community or even business users to form a network, share the cost and increase the usage of

²³⁶⁴ NPRM at para. 110 (*citing* 47 U.S.C. § 254(h)(3)).

²³⁶⁵ NPRM at para. 110.

²³⁶⁶ NPRM at para. 110 (*citing* 47 U.S.C. § 254(B)(5)).

²³⁶⁷ NPRM at para. 110 (*citing* 47 U.S.C. § 254(h)(2)(B)).

²³⁶⁸ NPRM at para. 111.

²³⁶⁹ NPRM at para. 111.

²³⁷⁰ Rural Iowa Indep. Tel. Ass'n comments at 6.

²³⁷¹ Taconic Tel. Corp. reply comments at 6.

advanced telecommunications access lines.²³⁷² ORHP/HHS notes that without sharing of infrastructure by educational, medical, business and other community resources, "development of advanced rural applications is more likely to fail."²³⁷³ Merit recommends allowing the sharing of transmission facilities with ineligible schools, libraries and health care providers who would pay full non-discounted rates.²³⁷⁴

743. Advanced Services. Several commenters express skepticism regarding the idea of defining or supporting advanced telecommunications and information services for health care providers and many assert that no attempt should be made to identify advanced services at this time.²³⁷⁵ NCTA argues, for example, that there is no need to require universal service support for advanced telecommunications services for health care providers and other public institutional users since cable operators can, and already are delivering such services.²³⁷⁶ Similarly, CCV asserts that there are numerous incentives in place assuring a rapid deployment of advanced services to health care providers. CCV notes, in support of this argument, that it has already entered into a series of "government/business partnerships" in its areas of service which will facilitate a rapid deployment of these services to health care providers. Therefore, it argues, universal service support should not be required for these advanced services.²³⁷⁷ Frontier adds that additional services, such as Asynchronous Transfer Mode (ATM) and ISDN technology should not qualify for support, absent a compelling demonstration of need, because the Commission's baseline set of services satisfies health care providers' need for access to advanced services.²³⁷⁸ Sprint argues that additional and advanced telecommunications services requiring support should not be defined until subscribership indicates which services are desirable and necessary, and the rural health care marketplace has been assessed. Furthermore, Sprint argues that many of the advanced services mentioned by the Commission are in their infancy and are still evolving.²³⁷⁹

744. Some commenters take the view that advanced services, though not identifiable

²³⁷² See, e.g., American Telemedicine comments at 3; Nebraska Hospitals comments at 2; Taconic Tel. Corp. reply comments at 5.

²³⁷³ ORHP/HHS comments at 10-11.

²³⁷⁴ Merit comments at 4-5.

²³⁷⁵ See, e.g., NCTA comments at 23.

²³⁷⁶ NCTA comments at 23.

²³⁷⁷ CCV comments at 5.

²³⁷⁸ Frontier comments at 5.

²³⁷⁹ Sprint comments at 23.

now, will become known in the future and should be studied and reviewed in an ongoing proceeding.²³⁸⁰ USTA states that such periodic review should be undertaken in conjunction with the proceeding[s] required in section 706²³⁸¹ of the 1996 Act as well as with the periodic review of the universal service definitions.²³⁸² Wisconsin PSC states that it may be best for the Commission to provide broad guidelines to identify the advanced service capabilities needed. Wisconsin PSC suggests further that the Commission provide matching funds or direct grants for states to administer, as is now done in the Lifeline and Link-Up programs.²³⁸³

745. Information Services. Netscape argues that since "the 1996 Act does not repeal, and in fact codifies the Commission's longstanding *Computer II* distinction between basic telecommunications and 'enhanced' information services, . . . Internet access is assuredly an 'information' service, not a 'telecommunications' service."²³⁸⁴ As such, Netscape contends, Internet access may be encouraged through the rules adopted pursuant to section 254(h)(2) but not supported under section 254(h)(1).²³⁸⁵ PacTel subscribes to a similar interpretation.²³⁸⁶

746. Technically Feasible and Economically Reasonable. Ameritech expresses doubts that access to advanced services would be technically feasible since access will require substantial equipment and inside wiring in addition to transmission capacity. It further doubts that access to advanced services would be economically reasonable since the market price of the equipment and the transmission capacity would be considerable.²³⁸⁷ BellSouth also opposes deployment of additional advanced services. BellSouth argues that deployment of additional advanced services should not be mandated because it would involve substantial new investments that may not be sound. BellSouth recommends, however, that transmission capabilities of 1.544 Mbps be provided to all rural health care providers as part of the universal service support for services "necessary for the provision of health care" under section 254(h)(1)(A). BellSouth argues further that basic connectivity can be provided through other services deemed eligible for universal service support pursuant to section

²³⁸⁰ See, e.g., USTA comments at 12.

²³⁸¹ 1996 Act, § 706.

²³⁸² USTA comments at 12.

²³⁸³ Wisconsin PSC comments at 17-18.

²³⁸⁴ Netscape further comments at 3 (*citing* Netscape comments at 14-17).

²³⁸⁵ Netscape further comments at 3.

²³⁸⁶ PacTel further comments at 14-15.

²³⁸⁷ Ameritech comments at 20.

254(h)(1)(A).²³⁸⁸ PacTel states that since mandated access to advanced services must be technically feasible and economically reasonable; such services should only be supported after the recipient has made a showing that it possesses and has the training to use related hardware and software.²³⁸⁹ USTA asserts that, while section 254(h)(2) requires that advanced services be provided in a manner which is technically and economically reasonable, it does not require that advanced services that do not qualify as special services be discounted or that the rates for advanced services provided to rural health care providers be reasonably comparable.²³⁹⁰ With regard to provisions of section 254(h)(2)(B) that require the establishment of rules defining the circumstances under which a telecommunications carrier may be required to connect its network to such public institutional telecommunications users, Metricom asserts that if a carrier is not eligible under section 214(e), that carrier should not be forced to connect its network to public institutional users.²³⁹¹

747. Encourage Deployment. The Advisory Committee recommends that universal service funds be used to help telecommunications carriers build or upgrade the public switched network or "backbone infrastructure" required for rural telemedicine.²³⁹² That Report recommends that such a backbone infrastructure, upgraded with universal service funds, be shared by schools and libraries and private entities, with private entities being required to repay the fund from profits generated from such services.²³⁹³ The Advisory Committee further recommends that the Commission establish policies that encourage interconnection standards and interoperability among networks with heterogeneous technologies. The Report suggests, as an example, that the Commission should establish rules that encourage the adoption of Internet Protocol (IP) over ATM as a superior interoperability standard.²³⁹⁴ The Report also notes that some states are using ATM to provide digital connectivity and argues that competitively neutral rules should encourage private sector involvement and competition among private sector firms.²³⁹⁵

748. Both USTA and NCTA argue that the Commission should employ the

²³⁸⁸ BellSouth comments at 23.

²³⁸⁹ PacTel comments at 11.

²³⁹⁰ USTA comments at 12.

²³⁹¹ Metricom comments at 8.

²³⁹² Advisory Committee Report at 8.

²³⁹³ Advisory Committee Report at 8.

²³⁹⁴ Advisory Committee Report at 9-10.

²³⁹⁵ Advisory Committee Report at 9.